FIG.1

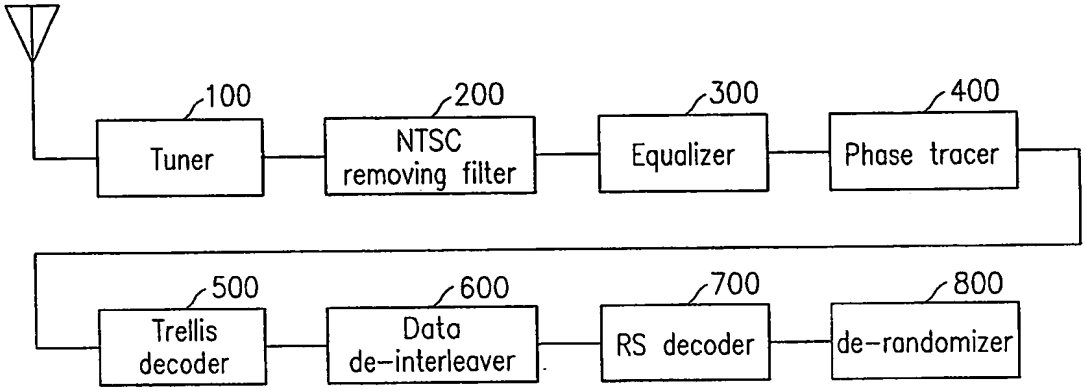

100
Tuner
200
NTSC removing filter
300
Equalizer
400
Phase tracer
500
Trellis decoder
600
Data de-interleaver
700
RS decoder
800
de-randomizer

FIG.2

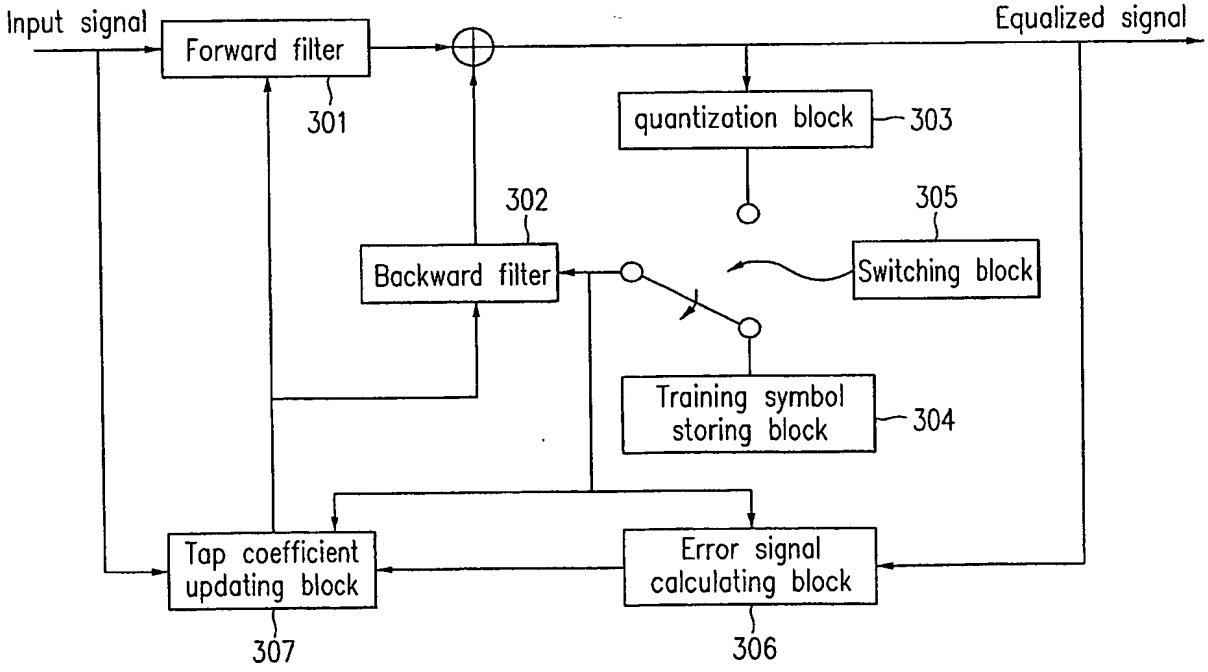

Input signal
Forward filter
301
Equalized signal
quantization block
303
302
305
Backward filter
Switching block
Training symbol storing block
304
Tap coefficient updating block
307
Error signal calculating block
306

FIG.3

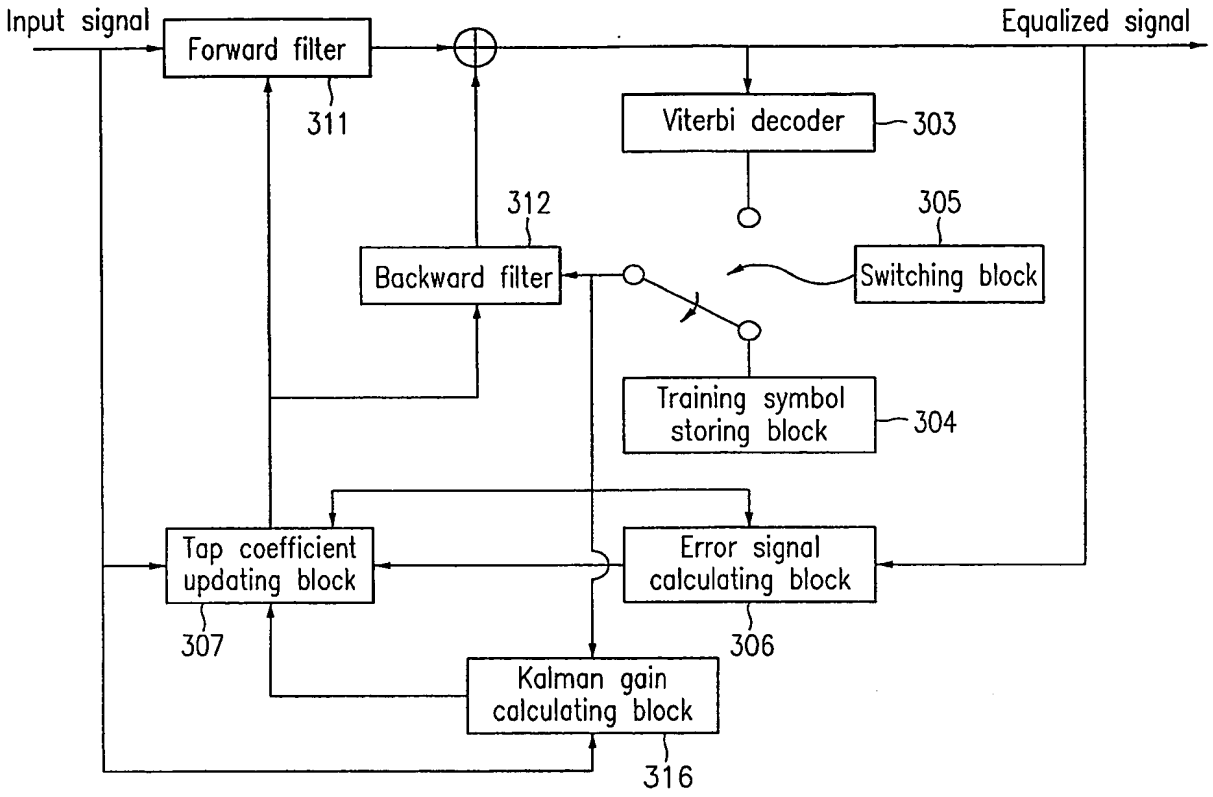
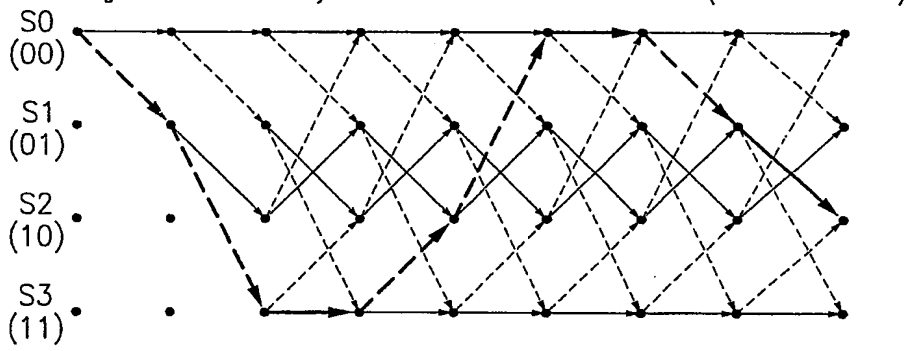

Input signal
Forward filter
311
Equalized signal
Viterbi decoder
303
312
305
Backward filter
Switching block
Training symbol storing block
304
Tap coefficient updating block
307
Error signal calculating block
306
Kalman gain calculating block
316

FIG.4

Input data and output value when the following input data are given

input data Y_1	1	1	0	1	1	0	1	0	1
input data Y_2	1	1	0	0	1	1	0	0	0
transmit data	110	111	001	011	110	100	010	001	010
transmit value	5	7	−5	−1	5	1	−3	−5	−3
received value	5	6.5	−5	−1.5	5	1	−3	−5	−3

Trellis diagram that actually transmitted data should have(thick solid line)